FOBO

NATURAL and CULTURAL RESOURCES MANAGEMENT PLAN

and environmental assessment

JUNE 1982

FORT BOWIE

NATIONAL HISTORIC SITE

NATIONAL PARK SERVICE

WESTERN REGION

UNITED STATES DEPARTMENT OF THE INTERIOR

NATURAL AND CULTURAL RESOURCES MANAGEMENT PLAN

and environmental assessment

FORT BOWIE NATIONAL HISTORIC SITE

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DEPARTMENT OF THE INTERIOR

MARCH 1982

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INTRODUCTION

Fort Bowie National Historic Site, a 1000 acre park situated in the northeastern portion of Cochise County, Arizona, contains the ruins of the first and second Fort Bowie, a Butterfield stage station, and other sites and ruins pertaining to mans activities (historic and prehistoric) in the Apache Spring area. The national historic site, authorized by an act of Congress (Public Law 88-510) approved 30 August 1964, was established in July of 1972. The act designates for preservation the site and remaining structures of Fort Bowie, with additional lands not to exceed a total of 1,000 acres. The enabling legislation further provides that the historic site be managed in accordance with the National Park Service "Organic Act" of August 25, 1916, which provides for public use and enjoyment of the site to the extent consistent with preservation of its resources.

Prime resources at Fort Bowie include the ruins of the first and second forts, the Butterfield Overland Mail station, the post cemetery and traces of the immigrant route/Butterfield trail and later military roads. Sites include Apache Spring, the 1854 Parke camp (part of the southern railroad route survey), the Bascom Affair site, and the 1861 wagon train massacre site. As might be expected, there are other historic remains and sites related to the frontier settlement period of 1854 to 1894; some have not been precisely located, and further historical research and archaeological investigation are needed. Prehistoric Indian sites have been found and additional remains of both prehistoric and historic Indian occupation probably exist within the park.

John Butterfield built a stage station here in 1858. Around this building raged two battles between the Army and the Chiricahua Apache band led by Cochise: the Bascom Affair of 1861, which touched off the long and costly Cochise War, and the Battle of Apache Pass in 1862, which led directly to the founding of the first Fort Bowie.

Until the final surrender of Geronimo, in 1886, Fort Bowie served as the nerve center of military operations against the Chiricahua Apaches. Campaigns ranged throughout southern Arizona and New Mexico and into northern Mexico. The struggle for control of the land determined the patterns of frontier development in the Southwest; not until the Apache Wars ended did settlement spread.

Fort Bowie lies in the southeastern corner of Arizona 85 miles north of Mexico at an elevation of 5,000 feet and occupies the southern fringes of Apache Pass, that separates the Dos Cabezas Mountains from the Chiricahua Mountains. These mountain ranges lie north and south of Fort Bowie, respectively, and trend roughly northwest to southeast.

Natural and scenic resources include the immediate mountain and grasslands environment and the distant valleys and mountain ranges that can be viewed from the site. Typical Upper and Lower Sonoran Desert vegetation flourishes

In the region, with pinyon, pine, oak, juniper and grasslands being the primary components of the upland vegetation, lower elevations give rise to many species of cacti as well as yucca, agave and several species of desert shrubs. A variety of deciduous trees can be seen along streambeds and near springs. No rare, threatened or endangered species of plants or animals are known to occur within the historic site.

The land within Fort Bowie Historic Site is classified as a single 1,000 acre historic zone. This zone is managed for the preservation of the historic resource. These are identified in the land classification map (see page 3) and are listed below.

Special Use Subzone: Transportation and utility corridors cover approximately 50 acres of the historic site. These corridors accommodate county road access, power lines and a natural gas pipeline. The road is the only visitor access to the site and is maintained by Cochise County.

Development Subzone: This subzone covers the administrative site for the purposes of protection and preservation of the resource. No visitor services are contained on the site. The subzone covers approximately 5 acres.

BLM Buffer Zone: With authorization of Fort Bowie in 1964, Arizona Land Order 035307 withdrew from mineral entry 670 acres of BLM land adjacent to the park boundary. The buffer zone protects park land adverse use and visual intrusions.

In order to extend the buffer zone into the mouth of historic Siphon Canyon, NPS proposed in January 1975 to BLM and the HYL (Mosley) ranch an exchange of 40 acres at this site for equal land elsewhere. The exchange was mutually agreed upon, however, the sale of the HYL Ranch to Dr. M. S. MacCollum and an ensuing lien upon the ranch negated the right to consumate the exchange. Prospects for exchange of the land in the near future remain uncertain.

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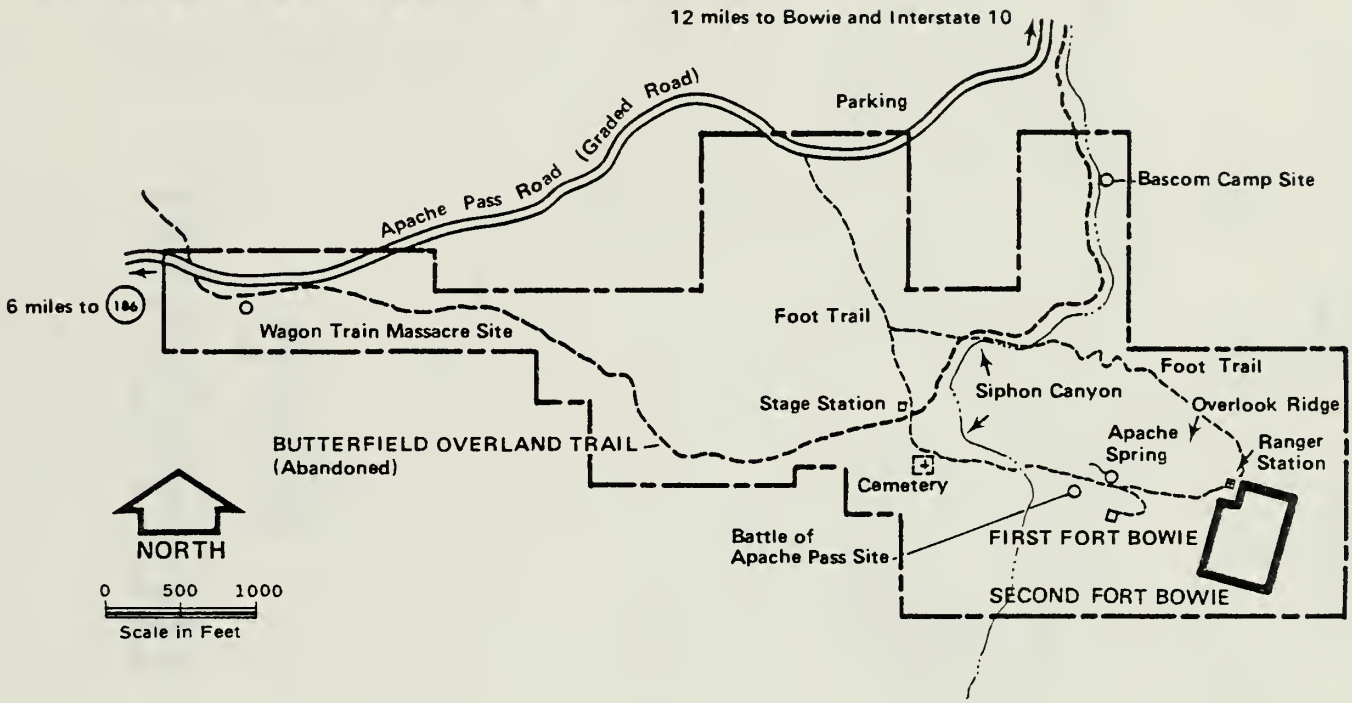
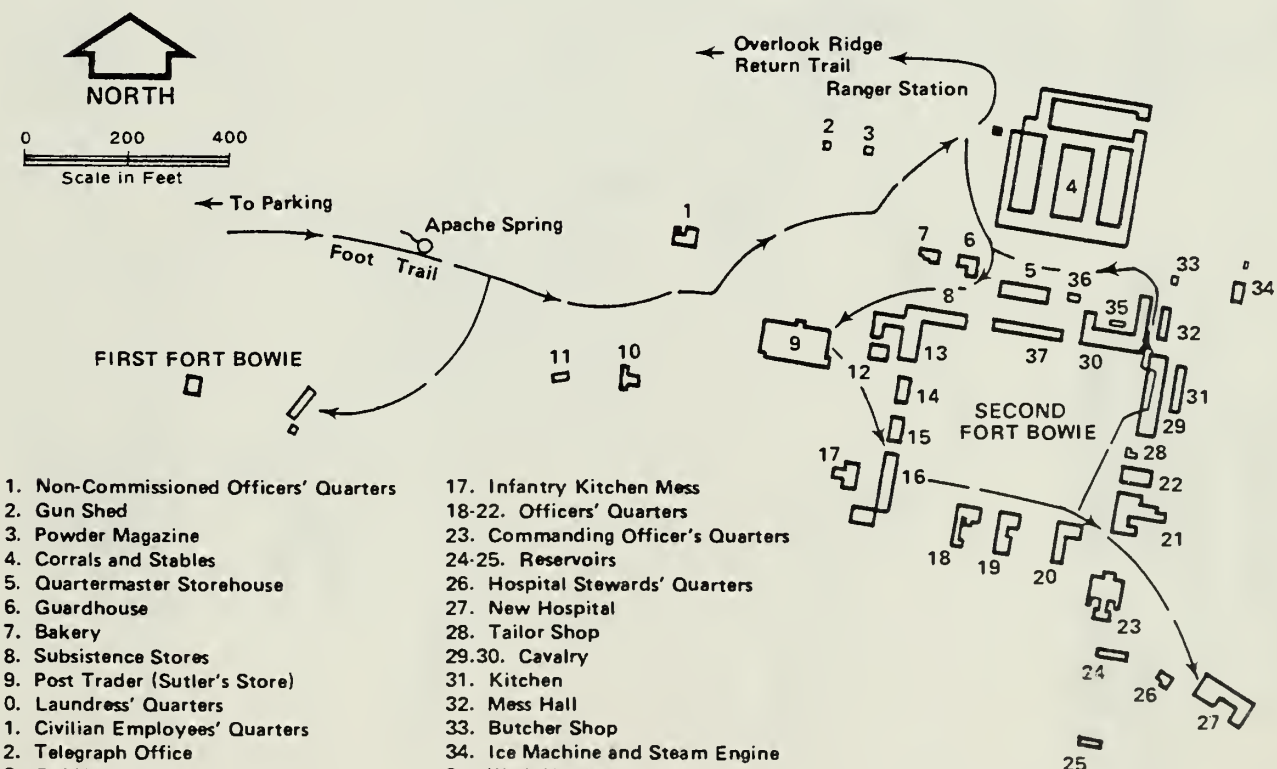
HISTORIC BASE MAP

FORT BOWIE NATIONAL HISTORIC SITE





1. Non-Commissioned Officers' Quarters
2. Gun Shed
3. Powder Magazine
4. Corrals and Stables
5. Quartermaster Storehouse
6. Guardhouse
7. Bakery
8. Subsistence Stores
9. Post Trader (Sutler's Store)
10. Laundress' Quarters
11. Civilian Employees' Quarters
12. Telegraph Office
13. Old Hospital
14. School
15. Adjutant's Office
16. Infantry Barracks
17. Infantry Kitchen Mess
18-22. Officers' Quarters
23. Commanding Officer's Quarters
24-25. Reservoirs
26. Hospital Stewards' Quarters
27. New Hospital
28. Tailor Shop
29.30. Cavalry
31. Kitchen
32. Mess Hall
33. Butcher Shop
34. Ice Machine and Steam Engine
35. Wash House
36. Oil House
37. Granary

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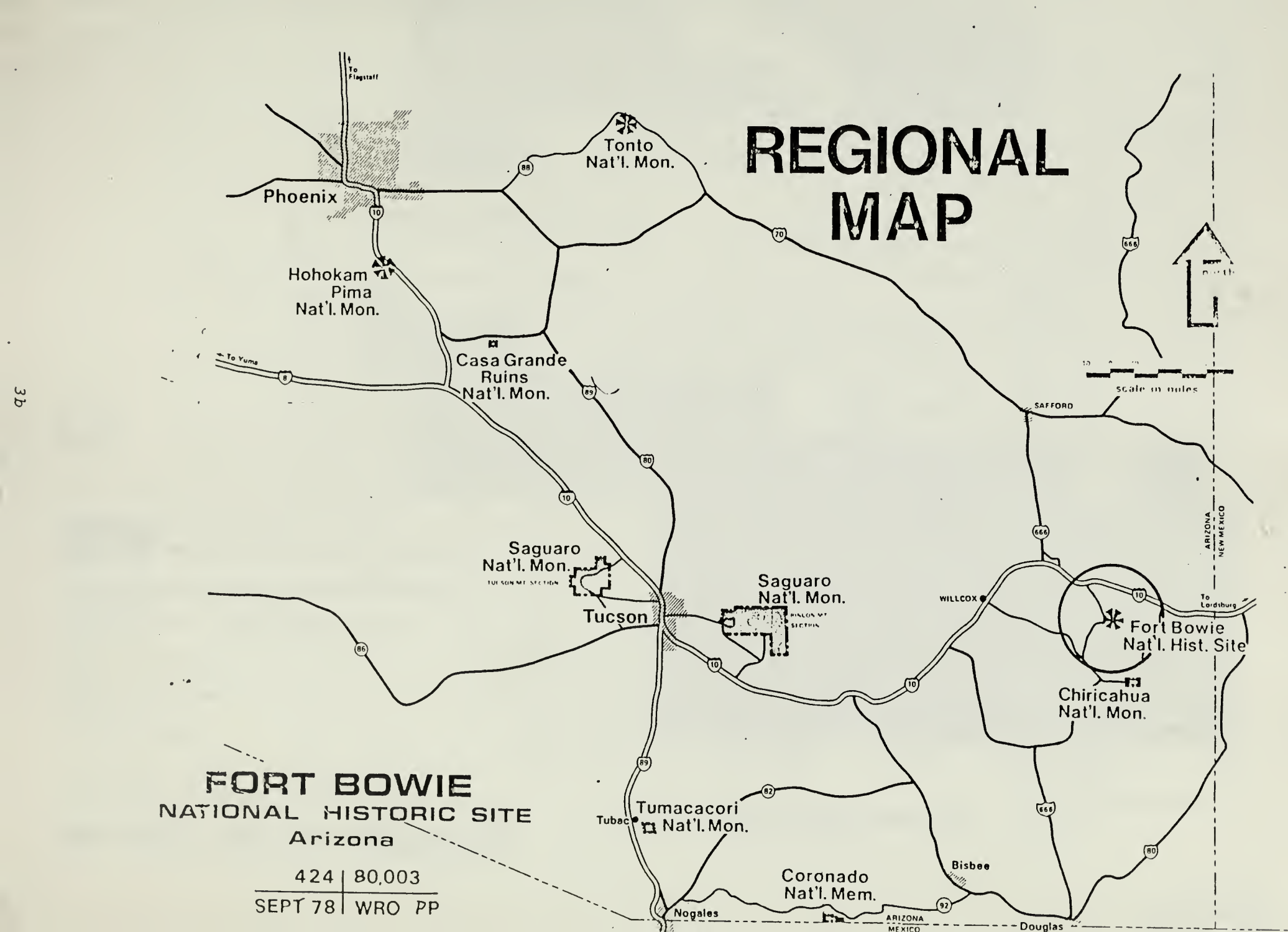
Aug. '82 | WRO-PP


REGIONAL MAP
To Flagstaff
Phoenix
Tonto Nat'l. Mon.
Hohokam Pima Nat'l. Mon.
To Yuma
Casa Grande Ruins Nat'l. Mon.
scale in miles
SAFFORD
ARIZONA
NEW MEXICO
Saguaro Nat'l. Mon.
TUCSON MT. SECTION
Tucson
Saguaro Nat'l. Mon.
RINCON MT. SECTION
WILLCOX
To Lordsburg
Fort Bowie Nat'l. Hist. Site
Chiricahua Nat'l. Mon.
Tumacacori Nat'l. Mon.
Tubac
Coronado Nat'l. Mem.
Bisbee
Nogales
ARIZONA
MEXICO
Douglas
FORT BOWIE
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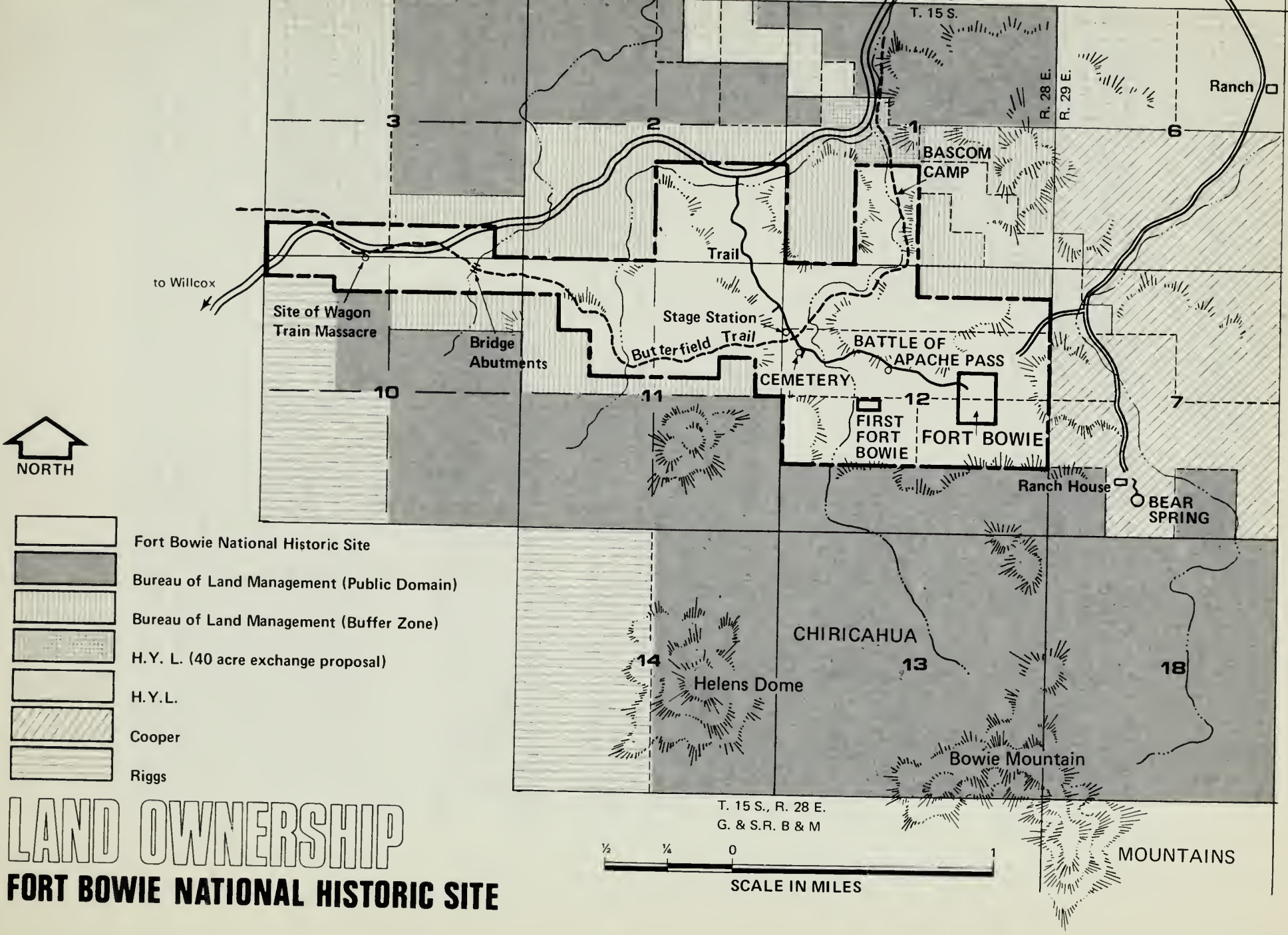

LAND OWNERSHIP

FORT BOWIE NATIONAL HISTORIC SITE

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NATURAL AND CULTURAL RESOURCES MANAGEMENT PLAN

The purpose of this plan is to identify and examine Fort Bowie's natural and cultural management problems and propose methods for their resolution. Upon approval of the plan the park will implement the proposed management actions. Special funding and additional staffing from the Western Archaeological Center, Southern Arizona Group, Chiricahua National Monument, Western Region and Bureau of Land Management may be necessary to accomplish many of the management actions that will be proposed.

Management objectives and Congressional mandates along with other planning documents have effected this plan and include the following: Fort Bowie Master Plan and Environmental Assessment 1975, Statement for Management, National Park Service Management Policies, Cooperative Agreements with the Bureau of Land Management, Historic Structures Report, Historic Structures Preservation Guide, List of Classified Structures, National Historic Preservation Act, National Environmental Policy Act and the Endangered Species Act.

The principal uses of the plan will be to serve as an action plan that will provide the framework for the proper management of Fort Bowie's natural and cultural resources. The plan will present a management program that is designed to carry out the directives and objectives of the planning documents and legislation listed above in such a manner that will provide for the perpetuation of the historic resource at Fort Bowie. This plan will also identify areas of natural and cultural resource deterioration and will propose research or management actions designed to correct or mitigate the adverse impacts identified.

Major natural and cultural management problems include the need to determine the water rights to two historic springs, determination of the impacts of cattle grazing, adverse visitor use impacts, historic ruins stabilization, surveys of historic routes, identification of the Stage Station/Indian Agency structures, care of park collections and identification of prehistoric and historic Indian sites.

The following paragraph from the Fort Bowie Master Plan indicates the primary objective of the management of Fort Bowie's natural and cultural resources. "Much of the land surrounding the Fort Bowie site of this early outpost remains as it appeared during the height of the fort's historic period a century ago. The surviving natural and historic resources lend themselves to preservation in a primitive state-not to modern restoration or reconstruction. Less is often more, and so it is with the solemn, abandoned post cemetery and the silent ruins of the calvary barracks and the Butterfield Overland Mail Station." Therefore, the thrust of the management program at Fort Bowie will be to preserve the historic resource as it exists and to permit the natural resources to perpetuate themselves in relative freedom from human impact within the fabric of the historic setting.

NATURAL RESOURCES MANAGEMENT PLAN

OVERVIEW AND NEEDS

The most significant adverse impacts occurring to the natural resources at Fort Bowie National Historic Site are those that arise from a variety of sources including cattle grazing, undetermined water use rights, off trail visitor use and fire suppression.

The following paragraphs will present the basic overview of natural resource management problems:

CATTLE GRAZING:

Cattle graze in the park under pre-arranged cooperative agreement for six months of the year and while their presence has been managed reasonably well, there remains a severe threat to the basic integrity of the historic site due to the presence of cattle. The lands grazed are probably not severely overgrazed from the standpoint of acceptable range management policies as they relate to lands primarily designated for grazing; however, Fort Bowie is primarily a historic site where the presence of cattle is an accomodating type of use permitted within an area where lands are not designated primarily for grazing. Therefore, the use of the site by cattle must clearly be secondary in importance to the overall objective of park management which is perpetuation and protection of the cultural and natural resources. The Bureau of Land Management determines the AUM's permitted at the Fort Bowie Pasture under a cooperative agreement with the National Park Service and they have been sensitive to the sites needs.

The basic adverse impacts associated with use of the site by cattle are the presence of grazed grass culms, browsed shrubs, manure on foot trails, flies, soil compaction, arroyo cutting, destruction of cultural and archaeological artifacts on the soil surface, threats of visitor safety by the presence of cattle and other habitat altering impacts that are clearly detrimental to the park and the visitor experience. Therefore, some method of management must be implemented that will remove or mitigate the adverse impacts associated with cattle grazing. Total elimination of grazing may be unnecessary but some reduction in the destructive effects of cattle grazing and trampling must be achieved if adverse impacts to environmental resources are to be removed. Some compromise method of management can probably be achieved that will permit a limited amount of use by cattle and still provide for the protection of the resources for which the historic site was created. Under present management direction, cattle grazing is one of the most important factors considered in the management of Fort Bowie. However, cattle grazing must be considered of secondary importance in the future if the resource is to be protected and maintained. There are both legal and moral obligations that direct this course of action. Legally, there is no directive that permits the use of a Park System area by cattle in a manner that results in the destruction of the area

or that is inconsistent with the basic purposes for which the area was designated. Morally, the National Park Service has an obligation to the people to manage areas under its care in such manner as will assure that those areas will be available to use by future generations in an unimpaired condition. Often, where several types of use are permitted, there arise conflicts between one type of use, such as cattle grazing, and another, such as preservation of an archeological resource, and since both are permitted by law, there must be some type of decision criteria to settle the conflict. In these instances the decision must always be made in such a manner as will protect the resource, in this case the historic fabric of the site, and assure that future generations will have at least the best chance of experiencing the resource.

The use of Fort Bowie by cattle under the present management system is apparently degrading the site and will continue to do so at an accelerated rate unless management action is taken in the near future. Therefore, some compromise management action that has the condition of the resource as its primary concern must be achieved. Reduction of AUM's through a joint effort by the Park Service and the Bureau of Land Management would be an appropriate first step in this direction.

In addition to reduction of cattle numbers, cattle should be restricted from the primary visitor use area. This would entail the exclusion of cattle from approximately 200-500 acres that encompass the entire trail system within the Fort Bowie Pasture (See Land Use Map Page). This plan has been discussed with the Bureau of Land Management with positive support.

WATER RESOURCES:

Three water sources exist within the park, two of which are commonly referred to as Mine Tunnel Springs while the other is known as Apache Springs.

The ownership of the water from these sources is of concern to both the Park Service and the former owner of the property who reserved some water rights at the time of property sale to the U.S. when the park was established. Contention regarding the extent of those water rights reserved has prompted the predecessors of the previous owner to bring suit. Until such time as this issue is resolved, the status quo of these water sources will be strictly maintained.

The importance of maintaining Apache Springs in a natural and aesthetically pleasing manner is of primary importance at this historical park. This important interpretation point dramatically shows the value of water in the arid west; indeed, the existence of this natural spring is the reason why the first fort was built in this area.

OFF-TRAIL VISITOR USE:

Fort Bowie lends itself to off-trail visitor use since the terrain is not highly dissected or unusually rugged but rather is composed of rolling hills with sparce vegetation. Visitors may wander from the designated trails to search for artifacts, take "short-cuts" or observe wildlife. Eventually, off-trail use may cause new trails and result in resource loss through the removal of artifacts or destruction of vegetation. At the present time, problems created by off-trail visitor use are minor, however, methods must be developed to reduce and redirect off-trail use since visitor use at Fort Bowie will undoubtedly increase in the future.

FIRE SUPPRESSION:

Fort Bowie has managed all fires of both natural and man caused origin under a total suppression policy since the site was designated. Natural and man caused fires are extremely rare but historically both probably had effects on the area. It is known that Indians of the Fort Bowie area used fire for game management reasons and natural fires have occurred for thousands of years. The effects of fire on the vegetation and wildlife at Fort Bowie is unknown and the use of the area by man and cattle for the past few centuries has probably severely altered the natural pattern. Therefore, it would be difficult to establish a natural fire management plan for Fort Bowie and given the historic nature of the site with the relatively small size, 1,000 acres, a fire management plan that would permit natural fires to occur is not advisable. However, a fire management plan must be developed that will be responsive to the protection needs of the historic site. A modified fire suppression plan that would provide for the suppression of all unwanted fires but still be sufficiently flexible to permit prescribed fires would seem to be the best management direction at this time. In the future, some natural fires could potentially be permitted if they occurred at such a time and in such locations that were acceptable to both the National Park Service and the Bureau of Land Management.

NATURAL RESOURCES MANAGEMENT PROGRAM
FORT BOWIE NATIONAL HISTORIC SITE

The following project statements detail the proposed management actions that will be used to reverse or eliminate those adverse impacts identified as occurring to the natural resources of Fort Bowie. The project statement will discuss the problem presently affecting the resource and describe current management actions, if any, that are being taken to correct problem areas. Alternative methods of solving certain problems will be presented and the alternative most desired by management personnel will be identified and discussed.

Natural Resource Management Projects include the following and are listed in order of priority.

FOBO-N-1-CATTLE GRAZING

FOBO W-1-WATER RESOURCES

FOBO-N- 2 OFF-TRAIL VISITOR USE

FOBO-N-3 FIRE SUPPRESSION

NATURAL RESOURCE PROJECT STATEMENT

FOBO-N-1-CATTLE GRAZING

STATEMENT OF THE PROBLEM: Since the late 19th century, cattle have grazed in the Apache Pass area without interruption. Upon Congressional authorization of the Fort Bowie Historic Site in 1964, Congress stated that, as a condition of authorization, the National Park Service would permit the continuation of grazing.

> *"In accordance with an understanding reached with the two private land owners on February 9, 1960 the National Park Service would permit the continuation of grazing on the national historic site under the administration of the Bureau of Land Management. The only exception would be on those portions of the area devoted to public use and interpretation. These areas would be fenced to prevent the impairment of historic values by livestock and to enhance visitor enjoyment of the National Historic Site. Existing water rights and the related right of piping and pumping water from existing springs would be retained by the private owners." (Hearing before the Subcommittee on Public Lands, Committee on Interior and Insular Affirs, S. 91, 5.29.64.6)).*

Administration of grazing is presently performed by the Bureau of Land Management. The management actions of the Bureau reflect the desires of the National Park Service and they have consistently attempted to reflect our management concerns in their allotment of grazing units. Cattle that currently use the Fort Bowie Pasture belong to Dr. M.C. and Francis MacCollum of Phoenix, Arizona. An overview of the grazing management plan consists of the following: During a six month grazing period (November 1 through April 31) cattle are brought into the park and separated into two pastures with approximately 30-35 cattle going to each pasture. Each pasture has a watering tank supplied by Apache Spring. The southern portion of the park (See Land Use Map page__) serves as the Helen's Dome Pasture and is approximately 550 acres in size. This pasture merges with the BLM lands on Bowie Peak. The Helens Dome Peak and the Bowie Peak are two of the most visible and attractive mountains in the Fort Bowie vicinity and are a prime visual resource at the park. The Fort Bowie Pasture serves as the second pasture and is located within the most heavily used visitor areas in the park. Through the Fort Bowie Pasture visitors must hike approximately 1.2 miles of access trail in order to view the Fort ruins.

Prime resources in the Fort Bowie Pasture are essentially historic ruins and the "natural setting", however, the presence of cattle create the following adverse impacts.

1. *Manure and flies are evident along the entire trail system to the Fort.*
2. *Frequently, interpretive signs are damaged or destroyed by cattle and the replica Apache Camp trailside exhibit is in an almost constant state of repair and/or reconstruction.*
3. *Visual intrusions resulting from large groups of cattle are frequent during six months of the year.*
4. *A wide web of cattle trails and bedding sites throughout the park confuse the designated trail system, and create a variety of adverse impacts to the parks vegetation and soils.*
5. *Visitor safety is often threatened by aggressive behavior of the Brahman cross breed cattle that are common in this part of Arizona. Cattle may block trails or select bedding sites that include trail routes and/or historic ruins and when visitors approach the cattle may refuse to move or exhibit agressive behavior manifest by brief charges. The actual threat to visitor safety is probably more imagined than real, however, visitors do not appreciate this fact and many genuinely fear the cattle. There have been no visitor injuries due to attack by cattle but there are many complaints.*
6. *The legislation that created Fort Bowie did not permit unregulated use of the Fort by cattle but provided for cattle use within specified constraints. Among the restraints recognized was the exclusion of cattle from visitor use, historic and interpretive areas of the park. However, cattle graze over all but 40 acres of Fort Bowie within visitor use, historic and interpretive areas of the park. Visitors are permitted 40 acres of use and cattle get the rest. This situation is clearly not in the best interests of the Fort nor the purpose for which it was created and must be brought under regulative control.*
7. *Use of the Fort Bowie Pasture by cattle has created erosion problems and adverse impacts to the vegetation of the site. Arroyo cutting and increased stream bank erosion occur at an accellerated rate once the erosion process has been initiated. During years with sufficient rainfall, ground cover is generally sufficient to provide adequate forage for cattle without overgrazing. However, years of sufficient rainfall do not occur with regularity and in the dry years cattle numbers are not reduced but remain constant. The result is overgrazing and exposure of the soil surface to erosion forces. Arroyos do not disappear once they are initiated but rather increase. In addition, plants are differentially selected by cattle with the result that many species are severely restricted or removed altogether. Also, non native species such as Russian thistle begin to invade plant communities that are under severe stress from disturbance such as overgrazing and erosion.*

CURRENT MANAGEMENT ACTION

As noted in the Congressional Subcommittee hearing related to the authorization of Fort Bowie (S.91,5.29.64.6) Congress designated the Bureau of Land Management to manage grazing within the park. Since that time, a Bureau of Land Management conservation officer and the owner or foreman of the HYL

Ranch* ride through the park grazing lands and inspect the grazing system. Also, grazing policy is discussed regularly between the Bureau of Land Management personnel and Park Service Personnel.

The Congressional subcommittee hearings of 1964 also deemed that those areas devoted to "public use and interpretation"..."would be fenced to prevent the impairment of historic values by livestock and to enhance visitor enjoyment of the National Historic Site." Therefore, since 1967, approximately 40 acres of park lands, the Fort Cemetery and immediate Fort ruins, have been fenced with barbed wire to exclude cattle.

Photographic and narrative records from visitor statements have been recorded and filed for reference material related to the impacts of cattle use on the visitor experience and park resources.

RESULTS OF CURRENT ACTION

Current managerial action has advanced little beyond minimum compliance with Congressional legislation and intent. To date, management of cattle grazing at Fort Bowie has favored the use of cattle on the site to the detriment of the resource and a quality visitor experience.

ALTERNATIVE ACTIONS AND THEIR PROBABLE IMPACTS

1. CONTINUE PRESENT MANAGEMENT: This alternative would continue the grazing policies previously discussed and continue a management system whose methods and results are evident. Certainly, in the past 17 years the present management system has been detrimental to the park, therefore, if it is continued the natural resources of Fort Bowie will continue to decline. This is not acceptable management policy and is not recommended as a desirable course of action.

2. SEEK CONGRESSIONAL REVOCATION OF CATTLE GRAZING PERMITS WITHIN FORT BOWIE: The removal of cattle grazing would solve the problems resulting from cattle use. However, if cattle are managed in such a manner that results in acceptable impacts to the historic and natural setting at Fort Bowie this alternative would not be necessary. The problems created by cattle grazing in the past have not been the result of grazing as much as an absence of sound management recommendations on the part of the Park Service. The Park Service permits grazing at Fort Bowie, therefore, it should permit grazing of types and intensities that would protect the resource. If this is done, cattle could be permitted to graze in the future under meaningful management direction.

3. REDUCE GRAZING INTENSITIES AND AREAS: The most environmentally fragile area of the park is the heavily used Fort Bowie Pasture with the visitor access foot trail and concentration of historic ruins and sites. Cattle have not been excluded form visitor use areas and all historic sites as prescribed by the enabling legislation but have been permitted to graze in these areas. Therefore, cattle can be excluded from visitor use and historic resource sites without legislative approval. This *(HYL Ranch, Schaffer Ranch House, Apache Spring are all synonymous with Maya Apartments and are properties owned by Dr. MacCollum near Fort Bowie)

alternative would involve a study to determine the number of cattle that could continue to graze in the Fort Bowie and Helens Dome pastures with the focus of management concern being the well being of the resource, both historic and natural, rather than the numbers of cattle that those pastures could theoretically contain at optimum use levels. Also, approximately 300 acres of Fort Bowie would be excluded to cattle use. The 300 acres would be comprised of the access foot trails and the adjacent historic ruins and sites along the 1.5 mile visitor access trail. This alternative would provide meaningful management of grazing and live up to the provisions and mandates of the enabling legislation by protecting visitor use and interpretive areas of the park. The alternative has the added benefit of continued cattle use and protection of the visitor experience and the historic resources of Fort Bowie.

RECOMMENDED COURSE OF ACTION

The recommended course of action is alternative,3 REDUCE GRAZING INTENSITIES AND AREAS. This alternavive is desirable because it permits the Congressionally mandated course of action to be taken. The National Park Service permits grazing at Fort Bowie and the right to grazing is not inherently the management prerogative of the persons holding grazing permits but of the National Park Service by delegated authority of the Congress of the United States. The alternative chosen as the desired course of action has the the advantages of continuation of grazing and protection of the resource and is, therefore, closer the the spirit of the enabling legislation than any other action. This alternative will provide a more pleasing and safe visitor experience, protect vulnerable historic and natural resources and still provide for grazing in 700 acres of the Fort Bowie complex.

NATURAL RESOURCE PROJECT STATEMENT

FOBO-W-1 WATER RESOURCES

STATEMENT OF THE PROBLEM: Three water sources exist within the park, two of which are commonly referred to as Mine Tunnel Springs, while the other is known as Apache Springs.

The ownership of the water from these sources is of vital concern to both the Park Service and the former owner of the property, who reserved some water rights at the time of property sale to the U.S. when the park was established. Contention regarding the extent of those water rights reserved has prompted the predecessors of the previous owner to bring suit. Until such time as this issue is resolved, the status quo of these water sources will be strictly maintained.

In that water is a natural resource on par with the wildlife, forest, and geologic and historic features, we shall develop a management policy as appropriate at that time when our legal right to these waters has been quantified.

NATURAL RESOURCE PROJECT STATEMENT

FOBO-N-2 OFF TRAIL VISITOR USE

STATEMENT OF THE PROBLEM: In 1981, 5,157 people visited Fort Bowie. During the past 10 years, 57,766 people have been contacted at the Fort visitor center. The park contains approximately 3.3 miles of foot trails that are regularly maintained but unsurfaced. Designated trails originate from the parking area that is approximately 1.5 miles east from Apache Pass (See Map page_). In addition to the designated trails there is a designated historic route that traverses almost the entire length of the Fort Bowie Historic Site. This route is the old Butterfield Overland Stage Coach route that was abandoned late in the 19th century. The park brochure provides visitors with information concerning trails and the Overland Trail and most of the parks visitors hike the 1.5 mile trail from the parking area to the Fort Ruins. There is little or no control of the visitors route of travel, other than direction and interpretive signs, once they leave the parking area. Also, some visitors attempt to follow the Butterfield Overland Trail from the Wagon Train Massacre Site to the Fort, however, the number of visitors who attempt this trip are few.

The thorny desert shrub vegetation, insecurity about final destination and the fear of rattlesnakes all combine to discourage off trail travel to the Fort. However, a small portion of visitors attempt shortcutting and go off the trail to discover artifacts or simply to travel to distant points of interest. Instances of off trail visitor use are not extreme but they do occur and some adverse impacts do result.

Some of the adverse impacts that result from off trail visitor use include the discovery of artifacts (pieces of old glass, shell casings, buttons, etc.) that are subsequently removed from the Fort, disturbance of vegetation on frequently used short cut routes, and disturbance of historic sites such as the cemetery and the replica of the Apache camp. While it is true that the frequency of these adverse impacts is low it is nevertheless true that they tend to be cumulative and one is reminded of Leopolds admonition that after everyone has come and seen there is often nothing left to see.

The problem of off trail visitor use then becomes serious for a small site like Fort Bowie not because the incidences are high but because they are cumulative and there are not sufficient personnel to monitor visitor use and prevent the events when they occur. When an aritfact is removed it is permanently lost and, therefore, there is no management action that can replace the resource. Vegetation also recovers extremely slowly at Fort Bowie as is witnessed by the presence of the old stage road after almost 100 years of abandonment. Therefore, when short cut trails are made by visitors or cattle

they tend to remain and resist rehabilitation. Subsequently, visitors who come after these routes are made tend to follow them. Cattle trails are also often indistinquishable from the maintained trails and visitors can become disoriented by following them.

CURRENT MANAGEMENT POLICY: Off trail visitor use and the impacts created by that use is currently limited by trail signing, interpretive devices and publication of prohibited activities (cutting across trails, climbing ruin walls, collecting, metal detectors etc.) in park brochures and on signs. Trails created by short-cutting and cattle use are camouflaged by using brush to cover them and rehabilitation.

RESULTS OF CURRENT ACTION: There have been no studies conducted that can demonstrate how well current management efforts are succeding in mitigating adverse impacts created by off trail visitor use. Signs and interpretive devices seem to be adequate and visitors often bring in artifacts that they have picked up in the park. The instances of firearms violations and use of metal detectors have decreased but visitation has decreased also so it is difficult to determine to what cause the decreases in violations is to be attributed.. Also, there are still instances of off trail use and cattle still produce additional trails, therefore, our management efforts are not the ideal attainable.

ALTERNATIVE ACTIONS AND THEIR PROBABLE IMPACTS:

1. CONTINUE PRESENT MANAGEMENT: There is some evidence that the present management system is working and that, given the austere nature of present funding and personnel levels, the present system is probably the best for Fort Bowie at this time. However, we are experiencing resource loss and undoubtedly will experience more in the future. Also, we feel that the resource loss, while not acceptable, can be held to low levels if the present system is upgraded and adhered to conscientiously. If the present system is upgraded by improving or initiating a regular trail patrol at irregular times it is possible that greater contacts with visitors who intend to violate regulations would result. Also, the exclusion of cattle from visitor use areas will greatly facilitate the elimination of cattle trails. This alternative will provide the greatest protection to the resource available under the present management system and levels of funding and personnel. It is not the ideal but it is the most realistic and effective alternative for Fort Bowie.

2. NO ACTION: The alternative of no action would involve the reduction or elimination of current management policy and would compromise the mission of the National Park Service at Fort Bowie. Therefore, this alternative is not acceptable.

3. RESEARCH AND MONITORING PROGRAM: The park could contract a plant ecologist or acquire the aid of the Resoruce Management Specialist at Chiricahua to establish study plots near trails and historic sites to determine the extent of the resource loss being sustained. The study plots would be valuable within the heavy use areas and could provide valuable information relative to the amounts of vegetation and soils that were disturbed at known visitation levels and,theoretically,the probabilities of cultural resource loss, represented by artifact removal, could also be determined.

RECOMMENDED COURSE OF ACTION

The current management policy is the recommended course of action since it has been proven to be the most effective for Fort Bowie at this time. Placement of short-cut blocks made from brush and adequate signing will be maintained on a regular basis. Also, increased patrols may be made during periods of increased visitor use and the Superintendent and staff will make an annual reassessment of all sign wording and placement.

NATURAL RESOURCE PROJECT STATEMENT

FOBO-N-3-FIRE MANAGEMENT PLAN

STATEMENT OF THE PROBLEM: Lightning caused fires within the Fort Bowie area have occurred for thousands of years. There is also some evidence that native populations of man used fire to improve game habitat. Fires within the 1000 acres of Fort Bowie have been very infrequent during the past several years, however, there have been several fires during the past five years that would have burned into the park had they been left alone. The Fort does not have a Fire Management Plan at this time and is currently suppressing all fires regardless of origin. A fire management plan needs to be developed with the cooperation of the Bureau of Land Management in order to provide a guide to the management of fires in the future.

CURRENT MANAGEMENT ACTION

Since the occurrence of fires within the Fort Bowie site has been very rare, no fire management plan has been developed over the years. All fires have been suppressed when they occurred on the Fort Bowie site and all other fires that occurred on adjacent lands are usually suppressed by the Bureau of Land Management or the Forest Service. There are no cooperative agreements between Fort Bowie and either of these two agencies.

ALTERNATE ACTIONS AND THEIR PROBABLE IMPACTS

1. CONTINUE PRESENT MANAGEMENT: The present management action also represents a no action alternative since there is not a fire management plan nor any real expressed management objectives relative to fire management. Therefore, the present management alternative is not acceptable since it does not provide for the development of a stated fire management program.

2. DEVELOP A FIRE MANAGEMENT PLAN: A fire management plan could be developed that would formally outline the direction that the National Park Service will take relative to the management of fire at Fort Bowie. The plan would follow the policies outlined in NPS-18 and the Western Region Fire Management Plan as they would apply to a National Historic Site. The plan would set objectives and discuss the methods that will be used to manage fire in the future. A program of total suppression or a modified suppression/prescribed fire program would be the most useful and flexible for Fort Bowie. The impacts of a fire management plan would be desirable since they would provide a written fire management program with measurable objectives. Also, a fire management plan would probably result in a cooperative agreement with the Bureau of Land Management that would outline each agencies responsibilities and intentions as they realted to fire management in the Fort Bowie Area.

RECOMMENDED COURSE OF ACTION

Alternative 2 will be the course of action that will be taken at Fort Bowie. This alternative represents the only desirable management action available at Fort Bowie.

ENVIRONMENTAL ASSESSMENT

NATURAL RESOURCES MANAGEMENT PLAN

The following environmental assessment evaluates the impacts that proposed natural resource management actions may have on the natural resources of Fort Bowie, and is an estimate of how various resources may be effected by the implementation of the proposed plan.

NEED FOR THE PROPOSED ACTIONS:

1. CATTLE GRAZING: The right to graze cattle within present park boundaries exists by Congressional action, however, significant adverse environmental impacts represented by soil compaction, alteration of plant communities, manure, flies and threats (real and imagined) to visitor safety. In addition, the presence of cattle may be accellerating rates of erosion and arroyo cutting within the Fort area.

The total removal of cattle from the Fort Bowie site would be the most desirable management action, however, it is probably not necessary if the cattle are reduced in numbers, restricted from visitor use and historic areas, and managed in a manner more compatible to the well being of the historic site. Cattle should be removed from those areas of Fort Bowie that accomodate visitor access trails, archaeological sites, visible ruins and administrative areas. The proposed action would involve excluding cattle from approximately 300 acres of Fort Bowie rather than the ridiculously low 35 acres that currently exist. Implementation of this proposal would provide meaningful protection to soil, vegetation and historic resources presently being degraded by the presence of cattle in large numbers. Also, the visitor would have a safer and more aesthetically pleasing visit to Fort Bowie.

Alternatives and Probable Impacts: The alternatives considered for this proposal included no action,represented by continuation of the present management system, seeking to obtain Congressional revocation of grazing permits, and reduction of grazing intensities and areas.

The continuation of the present management action is not acceptable because it would result in unacceptable resource loss. The removal of all cattle from the 1000 acre Fort Bowie site by revocation of permits would remove all the adverse impacts presently resulting from grazing, however, this action is probably not necessary if cattle are managed more intensely in the future. The preferred alternative is the reduction of AUM's over the 1000 acres of pasture and exclusion of cattle from approximately 300 acres of the Fort. This alternative would remove cattle from the most fragile historic areas and increase the probability that the visitor would have an enjoyable and pleasing visit.

SOURCES CONSULTED: Bureau of Land Management, Solicitor, Western Region. Arroyos & Environmental Change In The American Southwest, Cook, Ronald U., and Reedes, Richard W., 1976.

2. *WATER RESOURCES: To be supplied upon completion of negotiations on the water rights issue.*

Alternatives and Probable Impacts. The right to the use of Apache Spring and Mine Tunnel Spring are presently involved in litigation between Maya Apartments and the United States. Such litigation has been suspended pending the outcome of an out of court settlement. Should the parties involved fail to reach an agreement, the National Park Service would be bound by the decision of the court. That decision could be adverse and as such could result in a pipe line and power lines being built across the Fort Bowie National Historic Site. Apache Spring could also be used for cattle watering as the sole use.

SOURCES CONSULTED: Park Files, United States Solicitor Ralph Mihan (WRO), Plaintif and ranch owner Dr. MacCollum(Maya Apartments).

. OFF TRAIL VISITOR USE: Research and monitoring of off trail visitor use should be conducted to determine the degree of damage being sustained by the resource. The primary impacts of visitor use involves walking from the trail across open terrain and cutting across trail switchbacks. However, the impacts of humans is difficult to separate from those resulting from cattle grazing. Visitor use must be managed to reduce, eliminate and/or mitigate off trail visitor use and encourage visitor use along interpretive trails and access trails.
Alternatives considered for the proposal included monitoring of significant impact areas, especially foot trails, and a no action alternative.

Alternatives and Probable Impacts: Heavy off trail use areas could be monitored to determine the amounts of use and the impacts the use was having on the resource. This alternative would be a good companion to the desired direct and indirect control methods recommended as the course of action. The impacts of this alternative would be to provide baseline information concerning use levels that could be regularly sustained by the resource and would

provide valuable management information.

SOURCES CONSULTED: Staff Fort Bowie and Chiricahau National Monument.

4. FIRE MANAGEMENT: Fire has been very infrequent within the 1000 acre Fort Bowie site, however, several fires have occurred in the past five years on Bureau of Land Management areas adjacent to Fort Bowie. These fires would have burned into the Fort Bowie site had they been left alone. Also, Fort Bowie does not have a fire management plan that clearly outlines policy regarding fires or directing action to be taken in the event of a man caused or natural fire. Therefore, a great need exists for the development of a flexible fire management plan that will provide for the suppression of unwanted fires and yet permit the use of prescribed fires under conditions that favor the management of a historic site.

Alternatives and Probable Impacts: There are no alternatives other than continuing in the present management situation. However, this no action alternative is not permitted since a fire management plan must be developed for all Park Service areas. Therefore, a fire management plan will be developed. The presence of a documented fire management plan will provide direction and flexibility to all future management actions relative to the suppression of fire and the use of fire as a management tool. Other impacts will occur to soils and vegetation since fires may be permitted to occur under prescribed conditions at certain times. Blackened soil, changes in vegetation composition and structure, possible loss of combustible artifacts and soil erosion are all impacts that will occur in the presence of fire, however, these events will occur whether a fire management plan is in place or absent. A fire management plan will have the effect of mitigating these impacts by possibly reducing the size of fires that may occur and preparing in advance to limit the adverse impacts of fires when they do occur.

SOURCES CONSULTED: Bureau of Land Management, Staff, Chiricahua National Monument.

PROJECT STATEMENT TITLE: CATTLE GRAZING

NEED FOR THE PROPOSAL: Cattle grazing within the historic site and especially along visitor access trails has negative impacts on the resource and the visitor experience. At present, cattle use appears to have a higher priority than preservation of the resource and is not within the guidelines of stated Park Service Policy or Congressional directives as those policies and mandates relate to the use of the park by cattle.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION EXCLUDE CATTLE FROM VISITOR USE AREAS AND HISTORIC SITES.	NO ACTION CONTINUE PRESENT NPS/BLM MGT. SYSTEM.	ALTERNATIVE REMOVE ALL CATTLE FROM THE PARK.	ALTERNATIVE	ALTERNATIVE
Visitor Experience; Safety; Visual Impacts	Removal of cattle from 300 acres of Fort Bowie would remove unacceptable adverse impacts to the resources in those areas and provide the visitor with a more safe and aesthetically pleasing visit.	This alternative would do nothing to mitigate the resource problems created by cattle grazing in historic areas or problems related to adverse visitor experiences and threats to visitor safety.	This alternative is the best solution for the entire park area but is not a realistically achievable objective & probably would be an overkill solution.		
Soil Erosion & Arroyo Cutting; Soil Compaction	Elimination of cattle grazing on 300 acres would begin to control the amount of soil erosion and prepare the way for a return to more nearly natural rates of soil erosion & arroyo cutting	Soil erosion will continue and accellerate as will arroyo cutting.	Soil erosion would eventually return to normal levels and arroyo cutting would eventually disappear.		

PROJECT STATEMENT TITLE: *WATER RESOURCES. To be supplied upon completion of negotiations on the water rights issue.*

NEED FOR THE PROPOSAL:

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION FOLLOW THE DIRECTION OF AN OUT OF COURT SETTLEMENT.	NO ACTION NOT AN AVAILABLE ALTERNATIVE.	ALTERNATIVE NOT AVAILABLE AT THE PRESENT TIME.	ALTERNATIVE	ALTERNATIVE

PROJECT STATEMENT TITLE: OFF TRAIL VISITOR USE

NEED FOR THE PROPOSAL: Visitors create additional trails by cross cutting between exisiting trails and traveling to points of interest that are off access trails. Methods of controlling off trail use must be continued in the future to mitigate adverse impacts to the areas resources arising from this type of visitor activity.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION CONTINUE AND IMPROVE CURRENT MANAGEMENT ACTION.	NO ACTION	ALTERNATIVE RESEARCH AND MONITORING PROGRAM	ALTERNATIVE	ALTERNATIVE
Collection of Natural History Objects	This activity would be suppressed by use of trail signs, interpretive literature, trail patrol.	Permit the random removal of natural history objects.	Provide information relative to the amounts of damage being sustained by the resource.		
Excessive Off Trail Use	Impacts would be minimized through trail patrols, interpretive literature and covering up unauthorized trails with brush.	Provide no control of off trail use.	Provide information relative to how much use the off trail areas are experiencing. This alternative would provide no direct protection but would be a good program for a synergistic effect with the recommended action.		

PROJECT STATEMENT TITLE: FIRE MANAGEMENT PLAN

NEED FOR THE PROPOSAL: Fort Bowie does not have a fire management plan and, therefore, no clearly defined fire management policy. A fire management plan will be developed to assure that a fire suppression and perhaps a suppression/prescribed fire program will be available for future management use.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION DEVELOP A FIRE MGT. PLAN IN COOPERATION WITH BLM.	NO ACTION CONTINUE PRESENT MGT. ACTION.	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
Resource Protection.	Greater resource protection will be provided in the presence of a fire mgt. plan and a cooperative agreement with the Bureau of Land Management.	The absence of a plan would create the potential for larger fires and greater losses.			
Flexibility In Resource Mgt.	A suppression/Prescribed fire program would provide needed flexibility.	There would be no management flexibility in the absence of a fire mgt. plan.			
Vegetation	Vegetation would benefit from periodic prescribed fires and be protected from unwanted fires.	A total suppression program would not always be beneficial to vegetation.			
Soils	Soil fertility could be enhanced by prescribed fire but erosion would also be a problem factor.	Soils would be protected from all fires but not erosion.			

CULTURAL RESOURCES MANAGEMENT PLAN

OVERVIEW AND NEEDS

The Cultural Resources Inventory, required by Executive Order 11593, has not been compiled into a single management document; however, a wide collection of appropriate material relative to cultural resources has been compiled and is available in park files, reports and plans. Cultural resources information is available in documents such as List of Classified Structures, Scope of Collections, A Teachers Source Book for Environmental Living Programs, Cultural Resources Management Plan, Historic Structures Report, Master Plan and Environmental Assessment 1975 and the Statement for Management for Fort Bowie National Historic Site.

The Socio-Cultural Resources Inventory has not been compiled as a unit, however, the material is available in a variety of materials. The park has been active in such fields as environmental education, special ethnic and historic programs for students, scouts, historic and local groups. We also have periodic contact with outside groups such as historical societies, Apache Culture Center, University of Arizona and local Hispanic groups. A significant multi-cultural annual festival is also provided each year. Research continues when possible, in forms of library, local correspondence requests and oral interpretation.

The List of Classified Structures was compiled and completed in October 1978, by Historical Architect John Robbins of Denver Service Center and Western Archaeological Center. The list was initially intended as a section of the recently completed Historic Structures Report, however, it was not included and remains unbound in park files. We plan to bind it in the near future. A requested updating of the List of Classified Structures by Western Region May 1, 1981, in accordance with PL 96-515, has been completed and submitted to Western Region.

The Status of Museum Catalogue and accompanying Museum Catalogue Records was updated by the Southern Arizona Group Curator and the last entry was April 22, 1978. Since that time, only minor scatterings of items found on site have been acquired. These remain in a separate container until they can be catalogued by the park staff.

The National Register listings are current and all park lands are listed on the National Register of Historic Sites.

Research efforts relative to Cultural Resource Preservation appears to be adequate. A variety of adobe-stone preservation research, largely emanating from the Western Archaeological Center and the University of Arizona, has undergone experimental application between 1967 and 1979. The results have been largely negative, thus present application consists of applying untreated mud on adobe walls as needed. Lime is used as a mortar for stone. The insertion of "epoxy pins" in order to adhere lime plaster to adobe wall

was considered but the need for this proceedure no longer appears to be necessary.

The Adobe-Stone division of the Western Archeological Center, in conjunction with Western Region, continues to serve as the primary research source for the park.

An Historic Structures Preservation Guide for preservation of the park ruins is presently in preparation by Denver Service Center Architect Tony Crosby. Completion of the guide is expected in FY 1982.

Research conducted for purposes of interpretive information appears to be adequate. Interpretive needs are researched by the park staff by several methods including: keeping current on literature in publication, as well as on historic reproduction films, catalogues, and attendance of off-site training events that relate to park management. Travel restrictions have reduced attendance of off-site events in the past two years. The park has a considerable supply of materials needed for routine interpretiopm such as living history programs and material for the annual par festival, however, we hope to increase our supply of historic replica items such as weapons, uniforms, and other items necessary for an accurate and meaningful historic interpretive program.

The most critical research need at the present time is to identify the site of the Butterfield Stage Station and the Chiricahua Indian Agency. As these sites are positively identified they can be included into the park interpretive programs. Also, as long as the sites are unidentified, they remain exposed and unprotected and are not capable of being fully interpreted to the visiting public. Full excavations of these sites will require considerable time, personnel and expense. Also, the identification of these sites has remained low on the Southern Arizona Group priority list but high on the priority list of Fort Bowie. For additional discussion on site identification, see the Historical Structure Report, Historical Data Section, Fort Bowie: Its Physical Evolution, 1862-1894, by Jerome Greene and The Apache Pass Stage Station: A Reassessment Of It's Location, by Bill Hoy.

One other interpretive research need is an extensive report on social life as it relates to Fort Bowie during the late 19th Century.

CULTURAL RESOURCES MANAGEMENT PROGRAM

FORT BOWIE NATIONAL HISTORIC SITE

The following project statements detail the proposed management actions that will be used to reverse or mitigate those adverse impacts and needs identified as occurring to the cultural resources of Fort Bowie. The project statements will discuss the problems currently affecting cultural resources and describe present management actions, if any, that are being taken to correct problems or provide needed research. Alternate methods of solving certain problems will be presented and the alternative most desired by management personnel will be identified and discussed.

Cultural Resources Management Projects include the following and are listed in order of priority.

FOBO-C-1-FORT BOWIE RUINS STABILIZATION
FOBO-C-2-STAGE STATION/INDIAN AGENCY IDENTIFICATION
FOBO-C-3-INDIAN ARCHAEOLOGY SURVEY
FOBO-C-4-HISTORIC ROUTES SURVEY
FOBO-C-5-CARE AND PROTECTION OF PARK COLLECTIONS
FOBO-C-6-SOCIAL LIFE AT FORT BOWIE

CULTURAL RESOURCE PROJECT STATEMENT

FOBO-C-1-FORT BOWIE RUINS STABILIZATION

STATEMENT OF THE PROBLEM: (The Fort Bowie Ruins Stabilization package is listed on a 10-238 as Package Number 105, 4/4/75.) Subsequent to the abandonment of Fort Bowie by the Army in 1894, local residents removed the wooden sections of the Fort leaving the adobe and stone exposed to erosion. No serious preservation attempts were attempted on the walls until 1967 after Congress authorized the historic site.

CURRENT MANAGEMENT ACTION: The following narrative highlights the basic adobe stabilization efforts that have occurred since the designation of the historic site.

During 1967-68, a major stabilization project was undertaken on the ruins under the direction of the Ruins Stabilization Unit of the Southwest Archaeological Center, Globe, Arizona. The congregation of cattle around the ruins was halted by construction of barbed-wire fencing around the first and second forts, cemetery and stage station. In addition, adobe walls were capped with soil cement to minimize rainfall erosion on the wall tops.

Throughout the 1970's, spasmodic experimental stabilization occurred on the walls. A chemical called Daraweld was mixed with adobe and applied as a veneer to eroded sections of the adobe walls. In 1974, another major stabilization project was undertaken with the bathing of the entire adobe section with a new chemical called F-325 or Adobeseal. The project was led by Cultural Properties Division, Western Archaeological Center and augmented by two engineers from the University of Arizona. Subsequent to the treatments rainfall occurred and revealed that the F-235 chemical was of little value to adobe preservation efforts over extended periods of time. Also, there was evidence that the chemical may have had detrimental effects on the adobe walls.

In the summer of 1976, experimental walls were constructed and treated with over 20 brands of stabilization chemicals. Following a lengthy monitoring program, it was determined that none of the chemicals were of significant benefit for adobe stabilization purposes.

During the mid 1970's, it became apparent that the hard soil cement capping had created an accelerated rate of erosion beneath the hard caps. Therefore, in 1978, all soil caps were removed and replaced the following year with color-matching, untreated adobe caps. At the present time, this stabilization system is in use on the walls.

The current adobe stabilization program consists of replacing damaged areas of adobe with new adobe manufactured from native materials.

Current management policy dictates that no cement substance that is harder than the original adobe fabric will be used for stabilization. Also, no chemicals may be applied to the adobe or stone walls.

Stabilization of stone foundations will be accomplished by replacing the original mortar with a lime or mud mortar that matches the historic material.

A Historic Structures Preservation Guide is in perparation by Denver Service Center Historic Architect Tony Crosby. This publication will give sournd, updated directions for stabilizing adobe and stone structures at Fort Bowie. The guide should be published before the end of FY 82.

ALTERNATIVE ACTIONS AND THIER PROBABLE IMPACTS

Section 10 of the Historic Preservation Act is being used for park ruins stabilization projects. Also, the methods adopted by the Adobe-Stone Conservation Division of the Western Archaeological Center are currently in use as a guide for the acceptance or rejection of potential adobe stabilization projects. The upcoming Historic Preservation Guide should offer additional direction for any future adobe stabilization work. There are no other viable alternatives for adobe-stone stabilization projects at the present time. Therefore, other than an unacceptable no action alternative, the current management action is the desired alternative.

RECOMMENDED COURSE OF ACTION

The course of action summarized under Current Management Action is proposed as the best alternative available at the present time. Also, this system is recommended by the Western Archaeological Center as the most sound management action available.

Past experience obtained by 14 years of stabilization experimentation have formed the following program of adobe-stone stabilization:

1. Adobe stabilization will be performed on an annual cyclic basis or at such times as warranted by excessive erosion factors such as precipitation, heavy winds, rodent damage and shifts in topography.

2. Substances harder than the original material will not be used for adobe or stone stabilization work.

3. Original stone will be stabilized with either commercial lime or mud, depending on the nature of the historic material. Loose stones will be set with a fitting of natural mortar.

4. Only natural, color matching materials will be used for stabilization on adobe.

CULTURAL RESOURCE PROJECT STATEMENT

FOBO-C-2-STAGE STATION/INDIAN AGENCY IDENTIFICATION

STATEMENT OF THE PROBLEM: (The Stage Station/Indian Agency Identification project is listed on a 10-238 as Package Number 803). During 1858 the Butterfield Overland Trail Crew built a stone station in Apache Pass that would serve as a "Change" and "Meal" station for its passengers. The station served in that capacity until 1861. The station also served briefly as a Fort during the Bascom Affair of 1861, and the Battle of Apache Pass in 1862. In 1869 the station was used as a gold quartz mill and in 1880 it became a "sutler" store and was finally used as a privately operated mail station in 1889. The Chiricahua Apache Indian Agency was probably located at this site in 1875 and 1876. Both the "Anderson Quartz Mill" and "Chiricahua Apache Indian Agency" are marked on historic maps at a site between Apache Spring and the currently accepted site of the station. Therefore, there exists some doubt as to the actual location of the Stage Station and the Indian Agency and their historic relation, if any, to each other.

CURRENT MANAGEMENT ACTION

Southwest Region Historian, Robert Utley suggested in his Site Identification Study of 1959 that a likely site for the stage station was a pile of stones approximately 700 yards northwest of Apache Spring. This site is now designated as the stage station.

In 1968, the Ruins Stabilization Unit of the Southwest Archaeological Center concurred with Utley's observations and stabilized the "large pile of rocks just north of the cemetery" into a low cement-mortared foundation. Don Morris an archaeologist with the Ruins Stabilization Unit believed that the dates from excavated materials suggest that the stabilized site could possibly be of the correct size for a stage station.

The park began its initial development of the site in 1971 and established the site as the ad hoc stage station in published interpretive literature.

A more careful examination of historic literature in 1972 that related to the battles of 1861 and 1862 suggested that the stage station could possibly have been located about .25 miles below Apache Spring at the base of the southwest corner of Overlook Ridge adjacent to Siphon Canyon and the present visitor access trail. Following an extensive examination of distances, directions and descriptions from the historical literature, Fort Bowie Ranger Bill Hoy compiled an analysis of the sites in Apache Pass Stage Station: A Reassessment of Its Location. Hoy proposed the station site to be located

at the site below Apache Spring near Overlook Ridge and further that the site currently marked as the Stage Station was actually the ruins of the Chiricahua Apache Indian Agency.

In 1980, Denver Service Center Historian, Jerry Greene, in preparing his Fort Bowie Historical Structures Report, concurred with Hoy's findings and found a map clearly showing "agency" located at the currently accepted stage station site. Greene proposed that the existing structures at the stage station was actually a store house for the Apache Pass Mining Company from the Anderson Quartz Mill period.

The unexcavated site identified by Hoy and Greene has been examined on the surface by Western Archaeological Center archaeologists, National Park Service Historians and others. A project statement has been drafted and is presently on a low priority listing of Southern Arizona Group project priorities.

ALTERNATIVE ACTIONS AND THEIR PROBABLE IMPACTS

1. CONTINUE PRESENT MANAGEMENT: This alternative represents a no action alternative since management action has not been taken on resolving the problems of the Stage Station/Indian Agency location. This alternative will result in a continuation of an unresolved problem and could potentially result in resource loss. Failure to completely identify, correctly, the Stage Station and the Chiricahua Apache Indian Agency would seem to be irresponsible at best and a valuable cultural resource could be lost as a result of the failure to identify and stabilize the resources that may occur on the site. Therefore, current management action is not an acceptable alternative for the future.

2. EXAMINE HISTORIC LITERATURE AND EXCAVATE THE SITE: This alternative would provide for a thorough reexamination of existing historical information relative to the Stage Station/Indian Agency and prepare the site for excavation by the Western Archaeological Center. If examination of literature indicates that the present site of the Stage Station is in fact the ruins of another structure and if the site suggested by Hoy and Greene is probably the true site of the Stage Station then a test excavation would be highly desirable. The impact of an excavation would be visible and there would be disburbance of soils and vegetation. However, resolution of the location of structures critical to the existance and interpretive effort at Fort Bowie are of higher priority than adverse impacts resulting from excavation. Also, artifacts could be recovered that would settle the question of identifying the Stage Station and the Indian Agency and possibly give the park much more information concerning the Fort and its past history.

3. RELOCATE STRUCTURES WITHOUT EXCAVATION: This alternative would provide for a thorough search of historic literature to determine if the location of the Stage Station and Indian Agency could be positively identified without the need of excavation. This action would avoid digging or other impacts associated with an arehaeological exploration dig. However, failure

to excavate would also provide no information concerning the nature or extent of cultural resources that could occur on the site. In addition, the site could be vandalized in the future and the nature of the loss would not be capable of determination.

RECOMMENDED COURSE OF ACTION

Alternative 1, is the recommended alternative action. While adequate funding could be difficult to obtain in the future, the interpretive standards of the park appear to strongly direct that an excavation be conducted. In addition, the possibilities of error relative to the correct location of the Stage Station and Indian Agency appear to have been high in light of the research conducted by Hoy and Greene and, therefore, a more thorough investigation is clearly in order. Robert Utley has also recommended that an excavation be conducted, if necessary, to identify the ruins correctly.

CULTURAL RESOURCE PROJECT STATEMENT

FOBO-C-3-INDIAN ARCHAEOLOGY SURVEY

STATEMENT OF THE PROBLEM: The presence of pre-Apache Indian populations within the park is clearly evident from occassional finds of pot sherds. Within the adjacent Sulphur Springs and San Simon Valleys, archaeologists have examined numerous sites of Cochise Culture (7,500-300 B.C.). While the park has no records of Cochise Culture on its lands, pot sherds belonging to the Mogollon Culture (300B.C.-1200A.D.) have been found on occassion. Visitors have brought pot sherds to the contact station and have doubtless taken a number of them home. Also, a probable remains of an Indian structure of non-Apache origin has been located near the access trail to Fort Bowie. If discovered by the public, the site could easily be destroyed. Another significant site, reportedly Mogollon, has been located near the stage station. Flood deposition, erosion and the presence of cattle continue to seriously degrade these sites. Due to lack of knowledge of the park's pre-Apache Indian cultures, almost nothing has been done to include these people in the park's interpretive programs.

CURRENT MANAGEMENT ACTION: Management action is non-existant at the present time. Therefore, the sites that have been located are vulnerable to any and all adverse impacts from natural and man-caused disturbance.

ALTERNATIVE ACTIONS AND THEIR PROBABLE IMPACTS

1. NO ACTION: A no action alternative is not permitted since it would be contrary to Congressional legislation and result in unacceptable resource loss to identified archaeological sites.

2. CONDUCT AN ARCHAEOLOGICAL SURVEY: An intensive archaeological survey should be conducted throughout the 1000 acres of Fort Bowie by the Western Archaeological Center. The survey would be conducted to provide information necessary to prepare a report on the archaeological resources that occur at Fort Bowie. The survey would provide information relative to the extent and nature of the archaeological resources in the park and provide management with the knowledge necessary to manage its archaeological resources in a competent manner.

RECOMMENDED COURSE OF ACTION

Alternative 2 is the recommended course of action. Since most of the park has not been surveyed, it is highly probable that there are unrecorded pre-Apache sites. Therefore, an archaeological site survey and a resultant report on the resources identified is recommended to correct the problem.

CULTURAL RESOURCE PROJECT STATEMENT

FOBO-C-4-HISTORIC ROUTES SURVEY

STATEMENT OF THE PROBLEM: For nearly 300 years, travelers of European stock have passed through Apache Pass using the natural corridor as a more direct route to the east and west. Also, Apache Pass could provide water at any season of the year. Spanish journals document travel through the area as early as 1695 and 1767. Additional passages include the United States-Mexican boundary survey party in 1851, Southern Railroad Survey in 1854, the Butterfield Overland mail route in 1858 and many others after the establishment of Fort Bowie. Over the years, many routes that were spurs of the main Apache Pass Route were established. These routes have been placed on a Historic Base Map of major roads and trails in the Fort Bowie Historic Structures Report by Jerry Greene. With the exception of the Butterfield Overland Trail and the Army routes marked by the Fort Bowie staff in 1978, many other spur routes have not been traced in the field or correlated with Greene's base map. These routes, still visible in places,continue to erode and will vanish if not permanently marked for the future.

CURRENT MANAGEMENT ACTION: There is no management action presently being taken to permanently identify historic routes at Fort Bowie.

RESULTS OF CURRENT MANAGEMENT ACTION: The results of current management action are basically what follows a no action alternative and that being a potential loss of resources. The present action will eventually result in permanent loss of the resources identified.

ALTERNATIVE SOLUTIONS AND THEIR PROBABLE IMPACTS

1. NO ACTION: Since the Historic Structures Report has identified all major roads and spurs on the Historic Base Map, it is possible that no action could be taken and reliance on the Base Map could be the final management action. This alternative would have the impact of permitting the identified routes to become lost.

2. LOCATE AND MARK EXISTING HISTORIC ROUTES: This alternative would provide for the location on the ground of identified historic routes and permanently marking them for future reference and/or location. The impacts would be positive since the sites would not be lost. Negative impacts would be minimal since the only disturbance to the resource would be a series of permanent route markers placed in inconspicuous places.

RECOMMENDED COURSE OF ACTION

Alternative 2 is the recommended course of action. If no action is taken, the historic routes at Fort Bowie will be permanently lost in the future. The loss of this resource is not acceptable.

CULTURAL RESOURCE PROJECT STATEMENT

FOBO-C-5-CARE AND PROTECTION OF PARK COLLECTIONS

STATEMENT OF THE PROBLEM: Since the authorization of the historic site, a large amount of artifacts have been collected. Some artifacts are well suited for interpretive use and are maintained on interpretive display at the Visitor Contact Station. The remainder are stored at the park storage room and the remainder are stored at the Western Archaeological Center. These artifacts must be cared for and protected to prevent their loss in the future.

CURRENT MANAGEMENT ACTION: Approximately 417 artifacts have been catalogued and accessioned by the Southern Arizona Group curator since 1976. A few original documents including rare books and photographs are kept in document containers in the store room. The items are given protective care and are sometimes selectively used for interpretation.
A burglar alarm was installed in the store room and visitor contact station. Valuable items such as original weapons, period dress and sabers are stored at the Western Archaeological Center.

The alarm system has been plagued by frequent failures and on one occassion burglars removed six replica historic weapons and the burglar alarm did not function.

RESULTS OF CURRENT ACTION: Current management action has provided for the identification, storage and upkeep of park collections. However, there will be a need to continue this management action in the future to assure that artifacts will be safeguarded from loss or deterioration.

ALTERNATIVE SOLUTIONS AND THEIR PROBABLE IMPACTS

1. *NO ACTION:* A no action alternative is not acceptable since it is prohibited by Congressional and Park Service regulations.

2. *CONTINUE REGULAR INSPECTION AND MAINTENANCE OF ARTIFACTS:* Periodic checks on artifacts and regular accessioning of new artifacts will continue. To insure maximum protection of collections, it is proposed that the current alarm system be upgraded and inspected on a regular basis. Also, consideration should be given to the installation of wrought-iron bars over windows as a back up protective measure. Employees should also be given training in curatorial methods and security of artifacts.

CULTURAL RESOURCES PROJECT STATEMENT

FO-BO-C-6 SOCIAL LIFE AT FORT BOWIE

Statement of the Problem: The Fort Bowie interpreter is frequently asked questions concerning the Fort's social life. Items of common interest include: water systems, utensils, tools, food, music, money, roles of men and women, schools, religion, sports, living quarters and dress. Information on these questions is usually available in a variety of library and file sources at the park, however, no concentrated source on these subjects has been compiled. Therefore, there remains a need for a single publication of the post social life.

Current Management Action: Under present conditions, the interpreter must search through a variety of volumes and consume considerable time in order to acquire adequate information on this subject.

Results of Current Management Action: The present management system usually results in a degree of eventual success, however, the effort consumes excessive time and the results may be incomplete or inaccurate.

Alternative Solutions and Their Probable Impacts:

1. No Action: A no action alternative will continue the present management system and perpetuate the sample problems noted above.

2. Conduct Research and Prepare a Report on Social Life-Ways at Fort Bowie: This alternative would provide a single volume of information concerning the various components of social life at Fort Bowie. In addition, new information would probably be uncovered by the researcher for use in park interpretation. The research could be performed by a university history graduate student or by a research historian from the Denver Service Center with assistance from park interpreters, SOAR interpretive specialist, and Regional historian.

RECOMMENDED COURSE OF ACTION

Alternative #2 is the recommended course of action. Under this alternative, the history of the social life at Fort Bowie would be compiled by an experienced historian who has funding, time, sources and skills not readily available to the on-site park interpreter. Upon receipt of this work, park interpretation will have the single volume in the park library for study and reference.

ENVIRONMENTAL ASSESSMENT

CULTURAL RESOURCES MANAGEMENT PLAN

The following environmental assessment evaluates the impacts that proposed cultural resource management actions may have on the cultural resources of Fort Bowie, and is an estimate of how various resources may be affected by the implementation of the proposed plan.

NEED FOR THE PROPOSED ACTIONS:

1. FORT BOWIE RUINS STABILIZATION: Ruins stabilization has the hightest priority of all the proposed actions since the remains of the Fort are the prime resource of the area. Also, the ruins are the most fragile of the cultural resources since erosion is a constant factor every day of every year. The ruins must be subjected to a systematic stabilization program in order that they will remain a viable resource as long as possible.

Alternatives and Probable Impacts: The alternatives considered for this project included no action and the maintenance of a ruins stabilization program. The no action alternative is not acceptable since it would violate Congressional and Park Service regulations and permit the ruins to be devoid of any management attention. The effect of the stabilization program will be to provide continuing management attention to assure that the ruins will be as free from erosion factors as is possible at the present time while still permitting the Fort area to appear as an abandoned site.

SOURCES CONSULTED: Western Archeological Center, Denver Service Center.

2. STAGE STATION/INDIAN AGENCY IDENTIFICATION: This proposed action is critical in determining the accurate location of several of Fort Bowie's early structures. It appears from recent studies that the location of the Butterfield Overland Stage Station may be misidentified and that the structure currently identified as that ruin may actually be a storehouse for another structure. Also, the Chiricahua Apache Indian Agency ruins have not been located. Both the Overland Stage Station and the Indian Agency with their attendant structures may be located within a series of unexcavated mounds. These errors of identification will only continue unless a full examination and excavation of these sites is conducted.

Alternatives and Probable Impacts: Alternatives considered for this project include a no action alternative and excavation of the sites suspected as being misidentified or unknown. A no action alternative would provide for the continuation of present management action. This alternative is not acceptable because it would permit a known error in the interpretive program at Fort Bowie to continue unchallenged. Also, it would

not benefit the unidentified sites rather would permit them to continue in obscurity and subject to loss through erosion, vandalism or theft.

SOURCES CONSULTED: Western Archeological Center, Denver Service Center. Historians - Jerry Greene (DSC), Robert Utley, Dan Thrapp.

3. INDIAN ARCHAEOLOGY STUDY: The presence of pre-Apache Indian groups within Fort Bowie is evident by artifacts and ruins. Also, other early cultures, such as the Cochise, have been found in both valleys adjacent to the park. The artifacts are often picked up by visitors at several sites along access foot trails. These sites are subject to damage and vandalism and are poorly understood. Therefore, research in the form of an archeological site survey with a resultant publication will be necessary at Fort Bowie.

Alternatives and Probable Impacts: Alternatives considered were a no action alternative and an archaeological survey. The no action alternative would continue the present management action and is not acceptable since it would violate regulations and subject the resource to adverse impacts. An archaeological site survey would provide information relative to the nature and extent of Fort Bowie's archeological resources and enhance the parks interpretive program. There would be potential risks of soil erosion and disturbance of vegetation in the survey effort as well as any excavation that would occur subsequent to that survey. However, these adverse impacts are not avoidable and would be of a minor nature.

SOURCES CONSULTED: Western Archaeological Center.

4. HISTORIC ROUTES SURVEY: For nearly three centuries, Indian, Spanish, Mexican and Anglo travelers have used Apache Pass in order to make passage between the Dos Cabezas and Chiricahus Mountains. While it is assumed the early routes followed the general path of the Butterfield/Army road, there are indications that other routes also existed. These routes, other than the Butterfield/Army road, must be identified in the field and permanently marked.

Alternatives and Probable Impacts: Alternatives considered were a no action alternative and locating and marking the unidentified routes. A no action alternative would provide for continuation of the present unacceptable management action and would eventually cost the park the loss of the resource. Location and permanent marking of the routes will provide for the identification of the resource and a record of their extend and situation for the future. Little or no adverse impacts would accrue through the marking or identification process.

SOURCES CONSULTED: Western Archaeological Center, Denver Service Center Jerry Greene, Josephine Lawhon and Sam Mosely

5. PROTECTION OF PARK COLLECTIONS: A large number and variety of historic artifacts are presently stored within specimen cabinets at Fort Bowie. A collection of 478 species of plants is also maintained in an herbarium. A few original documents and photographs are kept in document boxes. These cabinets are secure in the park storage buildings and kept kocked when not in use. Access to any specimen is in the presence of park personnel only. Rehabilitation of the alarm system and installation of decorative bars over the windows would enhance the security of these collections.

Alternatives and Probable Impacts: Alternatives considered were a no action alternative and a regular monitoring and maintenance of park collections. A no action alternative is not acceptable since it violates regulations and permits unacceptable resource loss. The regular maintenance program will provide the necessary protection for all the parks artifacts and collections and permit the acquisition of more material in the future. In addition, the second alternative will provide that employees receive training in curatorial methods and artifact protection and maintenance.

SOURCES CONSULTED: Western Region Curator, Western Archeological Center, Harpers Ferry Center.

6. SOCIAL LIFE AT FORT BOWIE: It has been evident to park interpreters that the story of every day life at Fort Bowie is of considerable interest to the public and is a complex study involving many subject areas. Material available to the park interpreter must be gleaned from a wide variety of publications over considerable amounts of time. Due to the absence of a single volume that covers this theme, there is a considerable time lapse between the time a new employee arrives at Fort Bowie and the time he or she is able to adequately provide the visitor with accurate information concerning the life-ways of the people who lived at Fort Bowie.

Alternatives and Probable Impacts: Alternatives considered were a no action alternative and research that would result in a one volume work that would detail the way of life experienced at Fort Bowie during its operational period. The first alternative would provide for a continuation of current management action and would not solve the problem. Alternative two would cost money and time but would result in the creation of a resource that would be valuable now and in the future. Also, the second alternative would probably provide more information than is currently known or available to the interpreter at Fort Bowie.

SOURCES CONSULTED: Social Life at Fort Union, New Mexico in the 1880's, by Dale Giese, 1964; Western Region Historian Gordon Chappell and Denver Service Center Historian, Jerry Greene.

PROJECT STATEMENT TITLE: FOBO-C-1-FORT BOWIE RUINS STABILIZATION

NEED FOR THE PROPOSAL: As the park's prime resource and most fragile cultural resource, the adobe ruins must be stabilized and maintained for the future. The walls have deteriorated for over eighty years in response to human and environmental factors. The erosion process must be held to a minimum if the resource is to be sustained.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION PROVIDE PERIODIC STABILIZATION AND PRESERVATION	NO ACTION	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
ADOBE-STONE RUINS	This action will per the adobe-stone ruins of Fort Bowie to be stabilized and protected for the future as much as is presently possible.	This action will permit the ruins to gradually erode and be permanently lost.			

PROJECT STATEMENT TITLE: FOBO-C-2-STAGE STATION/INDIAN AGENCY IDENTIFICATION

NEED FOR THE PROPOSAL: A reexmination of the Butterfield Stage Station and Chiricahua Apache Indian Agency sites suggests that these structures have been misidentified and/or not identified for the past several years. Since these structures provide major interpretive themes for Fort Bowie, they need to be identified correctly and located accurately.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION REVIEW LITERATURE & EXCAVATE	NO ACTION	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
RUINS	Excavation will cause impacts to the ruins and result in some resource loss in the digging process.	Identification the site will be difficult or impossible. Ruins will remain unknown piles of debris.			
VISITOR USE	Correct identification of the sites will provide the visitor with accurate interpretive information.	Visitors will be deprived of accurate information relative to Fort Bowie.			
ILLEGAL COLLECTING & VANDALISM.	Knowledge of the nature and extent of the resource will provide opportunity to remove valuable artifacts and thus protect them from vandalism and/or collection.	The resource will remain vulnerable and subject to loss.			

PROJECT STATEMENT TITLE: *INDIAN ARCHAEOLOGY SURVEY*

NEED FOR THE PROPOSAL: *Pottery fragments are often found in the park. Also, several sites have been identified within Fort Bowie that are probably remains of pre-Apache cultures. No archaeological site survey has been conducted at Fort Bowie to properly identify and record archaeological sites.*

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION CONDUCT AN ARCHAEOLOGICAL SITE SURVEY	NO ACTION	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
ARCHAEOLOGICAL SITES	Sites will be identified and mapped. Protection will be given artifacts that are significant.	Sites will remain unidentified and will not be protected.			
Soils	There will be some disturbance of soils during the survey & following any excavations.	Soils will not be disturbed.			
Vegetation	Some vegetation will be destroyed during excavation activities	Vegetation will not be disturbed.			
Artifacts	Some artifacts will be disturbed and damaged in any excavation activities	Artifacts will remain in place unless removed by visitors.			

PROJECT STATEMENT TITLE: HISTORIC ROUTES SURVEY

NEED FOR THE PROPOSAL: Many travelers have passed through Apache Pass for the past three centuries. The United States Army built a variety of spur roads for its use. With the exception of the Butterfield/Army Road, all trails, roads and spur routes are in need of location and permanent marking. The routes will eventually disappear if not permanently marked.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION LOCATE AND MARK HISTORIC ROUTES	NO ACTION	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
Soils	Little or no impact should occur to soils.	No impacts			
Vegetation	Vegetation should remain intact.	No impacts			
Historic Routes	Historic Routes will be located and marked for the future. Additional hiking may occur along the routes once they are permanently marked.	Location and extent of historic routes will eventually be lost.			

PROJECT STATEMENT TITLE: CARE AND PROTECTION OF PARK COLLECTIONS

NEED FOR THE PROPOSAL: Fort Bowie has a variety of artifacts that need storage and maintenance. Each item must be properly accessioned and protected from theft, damage and deterioration.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION PRESERVE, STORE & PROTECT COLLECTIONS	NO ACTION ALLOW COLLECTIONS TO REMAIN UNPROTECTED	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
ARTIFACTS	ARTIFACTS WILL BE PROTECTED AND PRESERVED FOR AS LONG AS POSSIBLE.	MANY ARTIFACTS WILL BE LOST			

PROJECT STATEMENT TITLE: FORT BOWIE SOCIAL LIFE

NEED FOR THE PROPOSAL: Visitor interest in daily life-way and material culture at Fort Bowie is considerable. While information is available, it is widely scattered in a variety of sources throughout park files, libraries and off site sources. A historian needs to compile this data into a one volume source similar to the study completed at Fort Union, New Mexico.

ALTERNATIVE ACTIONS / IMPACT CATEGORIES	PROPOSED ACTION CONDUCT RESEARCH AND PREPARE A LIFE-WAY BOOK	NO ACTION	ALTERNATIVE	ALTERNATIVE	ALTERNATIVE
Interpretive Staff	The interpretive staff will have more information and spend less time preparing for presentation of visitor information.	Full interpretation of subject matter will be improperly done.			
Visitor	Will have a better visit experience and be better informed about Fort Bowie.	The visitor may have a less pleasing and less meaningful visit.			

RESOURCE PROGRAMMING SHEET

Fort Bowie NHS (Park) | Western (Region) | Arizona (State) | X Natural | Cultural | (Date) |

Aree Priority		RPM Ref. No.	Pack. No.	PROJECT TITLE	Action Type *	Year 1 NPS M. Y.	Year 1 Cost $1000.	Year 2 NPS M.Y.	Year 2 Cost $1000.	Year 3 NPS M.Y.	Year 3 Cost $1000.
1.	FOBO	N1		Cattle Grazing		.3	3				
2.		W1		Water Resources							
3.		N2		Visitor Impact							
4.		N3		Fire Management		.1	1				

1. This project presents no immediate or specific costs, however, fence construction (supplies and materials) is entered as the only costs.

2. At this writing, no extensive projects, nor their costs, can be anticipated pending resolution of current water rights litigation (Maya Apartments vs. United States), however, any such costs would, at this time probably be minimal.

3. Costs for visitor impact mitigation is expected to be limited to trail maintenance and signing, therefore, no costs beyond that of salaries is anticipated.

4. This project should require no costs beyond FOBO salaries.

RESOURCE PROGRAMMING SHEET

Fort Bowie NHS (Park) | Western (Region) | Arizona (State) | ___ Natural | X Cultural | ___ Date | Page 3 of 3

Area Priority	RPM Ref. No.	Pack. No.	Project Title	Action Type *	Year 1 N.P.S M. Y.	Year 1 Cost $1,000.	Year 2 N.P.S M. Y.	Year 2 Cost $1,000.	Year 3 N.P.S. M. Y.	Year 3 Cost $1,000.
1.			Fort Bowie Ruins Stabilization		.1					
2.		803	Stage Station-Indian Agency Study			5		30		
3.		804	Indian Archeology Survey			6				
4.		To be written	Historic Routes Study			1				
5.			Protection of Park Collections			0				
6.		805	Garrison Life at Fort Bowie			20		10		

1. Two WG-1 for 1 pay period
2. Estimate includes initial test excavation & possible follow-up excavation of site if deemed necessary-WAC est.
3. Estimate indicates survey only, no excavation. WAC estimate.
4. Estimate includes only NPS salaries and limited marking materials. FOBO estimate.
5. Essentially no costs are required here. FOBO estimate.
6. Costs refer to work performed by Denver Service Center historian for approximately 1-1/2 year. DSC estimate.